



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/729,998	12/09/2003	Dong-Yeon Kim	1793.1055	2804
21171	7590	01/17/2006	EXAMINER	
STAAS & HALSEY LLP SUITE 700 1201 NEW YORK AVENUE, N.W. WASHINGTON, DC 20005			PARK, ILWOO	
			ART UNIT	PAPER NUMBER
			2182	

DATE MAILED: 01/17/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/729,998	<b>Applicant(s)</b> KIM, DONG-YEON	
	<b>Examiner</b> Ilwoo Park	<b>Art Unit</b> 2182	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 15 November 2005.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1 and 3-15 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1 and 3-15 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

1. Claims 1, 11, and 12 are amended and claim 2 is canceled in response to the last office action. Claims 1 and 3-15 are presented for examination.

### ***Response to Arguments***

2. Applicant's arguments filed 11/15/2005 have been fully considered but they are not persuasive. In the remarks, applicant argues in substance that Thorland does not disclose a timer and further the "certain period of time" applies to the host device and not to the peripheral device.

The examiner respectfully disagrees with the applicant's arguments. Thorland teaches that an apparatus [software and/or hardware in col. 11, lines 49-53], implemented [e.g., col. 7, lines 49-60; col. 8, lines 61-67; col. 9, line 66-col. 10, line 13] in any one or both of the host device and the peripheral device, has a performance of transmitting a command signal from one device to other device, detecting of connection or non-connection, looking for alternative communication lines for the incorrect connection, etc. The apparatus further concludes the performance after a certain period of time [col. 9, lines 18-28] and indicates the result of the performance. The certain period of time run by the software/hardware is not an arbitrary nor indefinite in order not to the software/hardware characterized by running and waiting for receiving the command forever or uncertain duration; rather, the software/hardware must have a certain [fixed or settled<sup>1</sup>] period of time to wait for receiving the command and to

---

<sup>1</sup> Definition from Merriam Webster's Collegiate Dictionary, Tenth Edition

conclude the performance even though the command is not received within a certain period of time.

Thus, applicant's arguments are not persuasive and the rejections are respectfully maintained.

***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1 and 4-15 are rejected under 35 U.S.C. 102(e) as being anticipated by Thorland et al., US patent No. 6,457,071.

As to claim 1, Thorland et al teach an apparatus for indicating a connection state of an input/output cable, comprising:

an indicator [col. 9, lines 18-28] that is a communication device between an AT Attachment Packet Interface (ATAPI) drive [col. 1, lines 23-26] and a host [host computer 100 in fig. 1] interconnected via the input/output cable [connection cable 201] and that indicates [col. 9, lines 18-28] in response to a control signal whether the AT Attachment Packet Interface (ATAPI) drive is connected to or disconnected from the host via the input/output cable; and

a controller that sets a flag to check [col. 7, lines 23-32] the connection state of the input/output cable, when power is applied to the AT Attachment Packet Interface (ATAPI) drive, and outputs [col. 7, lines 33-39] the control signal to the indicator to indicate that the input/output cable is not connected to the host when a command [col. 6, lines 27-38] is not received from the host for a predetermined period of time [col. 9, lines 18-28; col. 7, lines 49-54]; and

a timer that counts a time required for receiving the command from the host [col. 9, lines 18-28; col. 7, lines 49-54].

5. As to claims 4, 7, and 9, Thorland et al teach the controller clears the set flag when the command is received from the host for the predetermined period of time [col. 7, lines 33-39].

6. As to claims 5 and 8, Thorland et al teach the controller clears the set flag after the indicator indicates that the input/output cable is not connected to the host [col. 7, lines 33-39; col. 8, lines 49-54; col. 10, lines 39-42].

7. As to claim 6, Thorland et al teach a method of indicating a connection state of an input/output cable [connection cable 201] via which an AT Attachment Packet Interface (ATAPI) drive [col. 1, lines 23-26] communicates with a host [host computer 100 in fig. 1], the method comprising:

when power is applied to the AT Attachment Packet Interface (ATAPI) drive, setting a flag that checks [col. 7, lines 23-32] the connection state of the input/output cable;

if a command [col. 6, lines 27-38] is not received from the host for a predetermined period of time [col. 9, lines 18-28] after the flag is set, commanding a timer to increase a time counter; and

if the increased time exceeds a reference time [certain period of time], indicating [col. 9, lines 18-28] that the input/output cable is not connected to the host.

8. As to claim 10, Thorland et al teach if the command is received from the host, signaling that the input/output cable is connected [col. 8, lines 49-54].

9. As to claim 11, Thorland et al teach an apparatus for indicating whether an input/output cable [connection cable 201] is connected between an ATAPI device [col. 1, lines 23-26] and a host device [host computer 100 in fig. 1], comprising:

a controller, coupled to the ATAPI device and an input/output interface to check [col. 7, lines 23-32] for a command signal [col. 6, lines 27-38] from the host device and selectively outputting [col. 7, lines 33-39] a control signal depending on whether a command signal from the host device was detected;

an indicator [col. 9, lines 18-28] responsive to said control signal to indicate to a user whether the input/output cable is connected between the host and the ATAPI device;

a timer circuit configured to increment a time counter each time the controller checks for the command signal and does not detect a command signal.

10. As to claim 12, Thorland et al teach the controller compares the timer counter to a predetermined time period and if the time counter is greater than the predetermined

time period, the controller outputs a control signal to the indicator and stops checking for the command signal [col. 9, lines 18-28; col. 7, lines 49-54; col. 10, lines 39-42; fig. 5].

11. As to claim 13, Thorland et al teach the indicator illuminates at least one light to visually indicate the status of the input/output cable [col. 9, lines 18-28].

12. As to claim 14, Thorland et al teach the indicator turns on an LED to indicate that the input/output cable is not connected and turns off the LED to indicate that the input/output cable is connected [col. 9, lines 18-28].

13. As to claim 15, Thorland et al teach a method of indicating whether an input/output cable is connected between an ATAPI device and a host device, the method comprising:

setting [col. 7, lines 23-32] a flag in a controller in the ATAPI device;

checking [col. 7, lines 23-32] for a command signal [col. 6, lines 27-38] from the host device if the flag is set;

incrementing [until a certain period of time in col. 9, lines 18-28] a counter if no command signal was detected;

comparing the counter to a predetermined limit [col. 9, lines 18-28] and if the counter is greater than the predetermined limit sending a control signal to an indicator for indicating that the input/output cable is not connected and clearing the flag [col. 7, lines 33-39; col. 8, lines 49-54; col. 10, lines 39-42]; and

if the command signal was detected sending a control signal to an indicator that the input/output cable is connected and clearing the flag [col. 7, lines 33-39; col. 8, lines 49-54; col. 10, lines 39-42].

***Claim Rejections - 35 USC § 103***

14. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

15. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Thorland et al., US patent No. 6,457,071.

As to claim 3, Thorland et al do not disclose the indicator is a light emitting diode that turns on in response to the control signal output from the controller, when the host is connected to the AT Attachment Packet Interface (ATAPI) drive via the input/output cable, and turns off when the host is not connected to the AT Attachment Packet Interface (ATAPI) drive via the input/output cable. Rather, Thorland et al oppositely disclose the indicator is a light emitting diode that turns off in response to the control signal output from the controller, when the host is connected to the AT Attachment Packet Interface (ATAPI) drive via the input/output cable, and turns on when the host is not connected to the AT Attachment Packet Interface (ATAPI) drive via the input/output cable [col. 9, lines 18-28]; however, it would be obvious to one of ordinary skill in the art as a design choice.

***Conclusion***

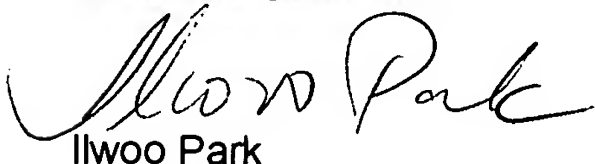
16. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).



A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ilwoo Park whose telephone number is (571) 272-4155. The examiner can normally be reached on Monday through Friday from 9:00 AM to 5:30 PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kim Huynh can be reached on (571) 272-4147. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

**ILWOO PARK**  
**PRIMARY EXAMINER**



Ilwoo Park

January 10, 2006